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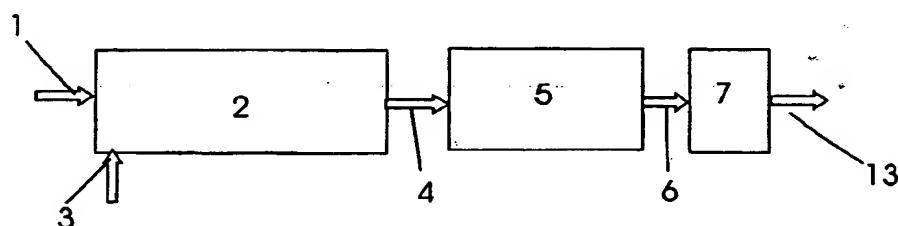
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(57) **Abstract:** Ions in a steady flow sample are counted by colliding the ions in a mixing chamber (2) with a numerical excess of uncharged aerosol particles, suitably glycerol, entrained in air, to transfer respective charges from the ions to charge individual aerosol particles and passing the gases through a separating chamber (5) subjected to an electric field to direct the charged aerosol particles to impinge upon an optical particle counter (7).